MAY 2 0 2014

PRECICE® Intramedullary Limb Lengthening System
510(k) Summary – K TBD
April 2014

1. **Company:** Ellipse Technologies, Incorporated
13900 Alton Parkway, Suite 123
Irvine, CA 92618

Contact: Rebecca Shelburne
Regulatory Affairs Specialist
Phone: (949) 837-3600 x227
Fax: (949) 837-3664

Date Summary Prepared: April 17, 2014

2. **Proprietary Trade Name:** PRECICE Intramedullary Limb Lengthening System

3. **Common Name:** Intramedullary Nail

4. **Classification Name:** Intramedullary Fixation Rod (21 CFR 888.3020)

5. **Product Code:** HSB (Rod, Fixation, Intramedullary and Accessories)

6. **Product Description:** The Ellipse PRECICE System is composed of the PRECICE nail (supplied sterile), locking screws, surgical instruments and an external remote controller (ERC). The nail is available in tibia or femur models with various diameters, lengths and screwhole configurations to accommodate a variety of patient anatomies. The locking screws are also available in a variety of diameters and lengths. The PRECICE nail is supplied sterile by gamma radiation while the locking screws and PRECICE specific accessories are supplied non-sterile and must be sterilized prior to use. The nail contains an enclosed rare earth magnet, telescoping lead screw/nut assembly, and planetary gearing.

7. **Indications:** The Ellipse PRECICE System is indicated for limb lengthening of the tibia and femur.

8. **Substantial equivalence:** Documentation that includes mechanical test results and detailed comparison to the predicate devices demonstrates that the Ellipse PRECICE System is substantially equivalent to the following 510(k) cleared device:

- Ellipse PRECICE System (K131677 and K133289)

Substantial equivalence is based on similar indications for use, designs, and on *in vitro* testing performed. The Risk Management file was updated to include the design modifications and no new risks were identified.

The modified Ellipse PRECICE System and the predicate device have the same intended use. Specifically, to lengthen the femur or tibia. The modified PRECICE nail and the predicate are available in the same application, screwhole configurations, stroke lengths, and overall lengths. The PRECICE Nail has the same patient contacting materials, technological characteristics and principles of operation as that of the predicate. Both devices are inserted into the intramedullary

canal of the femur or tibia and secured with locking screws. Both devices are adjusted non-invasively by the Ellipse external remote controller (ERC). The differences between the modified PRECICE System and the predicate device are as follows:

- The magnet stabilizer feature is being modified and re-located to the proximal end of the housing tube for ease of manufacturing, and
- The anti-rotation lug feature is being modified to be press-fit into the internal diameter of the housing tube, eliminating the tack welding process.

Data relied upon to determine substantial equivalence of the PRECICE System with the device modifications described in this submission to the cleared PRECICE System include the following:

- Mechanical testing
- Design functionality and verification testing

Conclusions can be drawn from the tests that the modifications to the PRECICE System are safe and effective and meet the performance specifications. The following specific tests have been performed in order to establish equivalence to the predicate devices:

Test Description	Applicable Test Standard
Static Four Point Bend	ASTM F1264-03
Dynamic Four Point Bend	ASTM F1264-03
Static Torque to Failure	ASTM F1264-03
Magnet Holding Torque	None
Device functionality and verification	None

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
Document Control Center – WO66-G609
Silver Spring, MD 20993-0002

May 20, 2014

Ellipse Technologies, Incorporated
Ms. Rebecca Shelburne
Regulatory Affairs Specialist
13900 Alton Parkway, Suite 123
Irvine, California 92618

Re: K141023
Trade/Device Name: Ellipse PRECICE® System
Regulation Number: 21 CFR 888.3020
Regulation Name: Intramedullary fixation rod
Regulatory Class: II
Product Code: HSB
Dated: April 17, 2014
Received: April 21, 2014

Dear Ms. Shelburne:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set

forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

Lori A. Wiggins

for
Mark N. Melkerson
Director
Division of Orthopedic Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: January 31, 2017
See PRA Statement on last page.

510(k) Number *(if known)*
K141023

Device Name
Ellipse PRECICE® System

Indications for Use *(Describe)*
The Ellipse PRECICE System is indicated for limb lengthening of the tibia and femur.

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON A SEPARATE PAGE IF NEEDED.

FOR FDA USE ONLY

Concurrence of Center for Devices and Radiological Health (CDRH) *(Signature)*

Casey L. Hanley, Ph.D.

Division of Orthopedic Devices

Page 1/1

3DJH 12 RI 56